REMARKS

The Office Action mailed June 6, 2005 has been reviewed and carefully considered. <u>Claims 7 and 26 are redrafted into independent form, but not otherwise revised.</u> Claims 1, 2 and 4 are canceled without prejudice. Claims 7, 8, 11-14, 16, 26 and 27 are pending, the independent claims being 7, 8, 13, 14 and 26. Reconsideration of the above-identified application, as amended and in view of the following remarks, is respectfully requested.

Claims 1, 2, 4, 7, 26 and 27 stand rejected under 35 U.S.C. 112, second paragraph, as indefinite.

The phrase "when upgrading the production-processing program" appears in only the fourth element of claim 1. Breadth in claiming does not imply indefiniteness.

Claim 1 would have been clear to one of ordinary skill in the art.

As to claim 27, items 12-15 in the Office Action relate to claim 27.

Item 12 of the Office Action suggests that the claim is indefinite for reciting the phrase "of claim 8" in both the claim 27 preamble and body, but fails to cite to any authority for this conclusion of indefiniteness by the Office Action.

The amendment of claim 27 that the Office Action proposes would seem to introduce confusion into a claim that is otherwise clear. Incidentally, in item 8, the Office Action discloses that it deems claim 27 not to be dependent for failure to assume "proper dependent format." The Office Action fails to cite to authority for its incorrect conclusion on the dependency of claim 27.

Item 13 of the Office Action suggests lack of antecedent basis for the claim

27 phrase "said computer for transferring data," but antecedent basis exists in the first element of parent claim 8. This phrase finds support in the first two elements of originally-filed claim 8, which recite the coupled configuration of "said computer for transferring data."

Item 14 appears to be addressed by the above comment regarding item 13.

The last sentence of item 15 states, "It is unclear how the apparatus may download the firmware from the host computer if the host computer is part of the apparatus."

However, claim 27 recites, ". . . at least one personal computer coupled to said host computer for receiving said updated firmware downloaded . . ."

If the host-computer component of an apparatus downloads to a personal computer, it follows that the apparatus downloads to the personal computer. The structure of the apparatus is set forth in claim 27. Accordingly, this point of argument by the Office Action is unclear.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 8, 13 and 27 stand rejected under 35 U.S.C. 102(a) as anticipated by U.S. Patent No. 6,195,511 to Harada.

Claim 13 recites:

> a host computer for converting an execution file prepared by an operator into said updated firmware; at least one personal computer coupled to said host computer for receiving said new firmware downloaded from said host computer; . . . said host computer is further operable for attaching a storage address information of said first memory means to said updated firmware

Item 20 of the Office Action suggest that the host and personal computer of

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claim 13 correspond to the Harada accessory 104 and camera 100, respectively. Item 20 of the Office Action also suggests that the first memory means of claim 13 corresponds to Harada bank a 4.

Presumably, then, the Office Action implies that the Harada accessory 104 attaches to the new camera control program it is to send to the camera 100 a "storage address information" of bank a 4.

More specifically, item 20 of the Office Action seemingly surmises that the Harada CPU 31 in the accessory 104 attaches, "to said updated firmware," the address of the bank to be rewritten in the camera 100 flash memory 3, but the applicant is unable to find any disclosure or suggestion of such in Harada.

Moreover, the firmware update occurs only in the event that, upon comparison between the camera and accessory copies, it is discovered that the camera copy is older than the accessory copy. No matter what updates or revisions occur subsequent to production of the camera 100, the microprocessor 6 of the camera 100 knows the addresses of its two flash memory banks 4, 5. It therefore seems impractical to make the accessory 104 responsible for knowing where, in the flash memory 3 of this particular version of this camera 100, particular banks 4, 5 reside.

Instead, it appears more likely to the applicant that:

a) the Harada microprocessor 6 (col. 4, lines 51-53; col. 6, lines 26(27)-27(28)) in the camera 100 determines, from a bit in the rewrite instruction, whether the rewrite instruction is "the one for" (col. 7, line 52) bank a 4 or the one for bank b 5; and,

b) according to means within the camera 100 (e.g., a pre-stored table in the

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microprocessor or instruction fields), directs the camera alteration program to bank a 4 or to bank b 5 correspondingly.

Harada fails to disclose, or even to suggest, that a camera accessory 104 performs "attaching a storage address information of said first memory means to said updated firmware."

For at least this reason, Harada fails to anticipate the present invention as recited in claim 13.

Secondly, Harada fails to disclose or suggest, with respect to Harada bank a 4, which the Office Action calls the first memory means of claim 13, "storing a boot program, operating codes and said operating system firmware."

The rewriting of the camera control program in the first memory means, what the Office Action calls Harada bank a 4, precedes camera initialization (col. 8, lines 6-11). The first memory means does not contain a boot program.

Notably, Harada's first step in rewriting a bank is deleting the bank (S302). For this reason too, the first memory means, what the Office Action calls Harada bank a 4, does not contain a boot program which would be likewise deleted.

Instead, Harada stores a boot program in the EEPROM 2b (col. 9, line 67).

Item 20 of the Office Action suggests that, by virtue of bank a 4 containing a flash rewrite control program, the above-quoted language of claim 13 is met.

The flash rewrite control program, however, merely provides a means by which to update relatively permanent information kept in electronically-erasable programmable read-only memory (EEPROM). The flash rewrite control program is not a

boot program (col. 1, lines 8-12).

In particular, Harada fails to disclose or suggest "a first memory means . . . for storing a boot program, operating codes and said operating system firmware."

For this reason, too, Harada fails to anticipate the present invention as recited in claim 13.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claim 8 recites:

said firmware board being operable to receive said updated firmware, and to select between the first and second memory means such that a production-processing program operates in the selected memory means in storing the received firmware into a corresponding region of said first memory means, said selection being based on an analysis of the transmitted firmware by said production-processing program residing in said first memory means

Harada, by contrast, in storing the camera control program into bank a 4, what the Office Action calls the first memory means of claim 8 (see item 20 of the Office Action), operates exclusively in bank b 5 (S116).

In particular, "in storing the received firmware into a corresponding region of said first memory means," Harada fails to select "between the first and second memory means" "based on an analysis of the transmitted firmware" to consequently operate "in the selected memory means."

For at least this reason, claim 8 distinguishes patentably over Harada.

Claims 1, 2, 4, 7, 14, 16 and 26 stand rejected under 35 U.S.C. 103(a) as unpatentable over Harada in view of U.S. Patent No. 6,272,587 to Irons.

Claim 7, now redrafted into independent form, recites, ". . . the upgraded production-processing program in the DRAM is transferred back to the flash memory."

Harada fails to disclose or suggest this aspect of claim 7.

Item 27 of the Office Action suggests that Irons shows an upgraded production-processing program in DRAM is transferred back to the flash memory, but this suggestion by the Office Action is incorrect.

Notably, item 6 of the Office Action, likewise, incorrectly suggests that "Irons teaches copying . . . to upgrade the <u>software</u> in RAM . . ."

Irons, instead, updates merely <u>data</u> of a program, and not program instructions.

Second, Irons updates merely a <u>portion</u> of the data of a program before transferring the <u>portion</u> to flash memory.

Irons relates to cache memory "for temporarily holding the most recently accessed <u>data</u>" (col. 2, lines 23-25) when "the same <u>data</u> is repeatedly operated upon" (lines 27-28).

In particular, each time the Irons microprocessor 14 is executing an instruction that requires flash memory <u>data</u> not currently contained in RAM cache, the current content of RAM cache is copied back to flash to make room in RAM cache for <u>data</u> in flash currently required by that instruction (col. 6, lines 53-57).

In this manner, the Iron microprocessor 14 is able to execute its instructions faster.

Irons, therefore, discloses, for increased updating speed, the updating in RAM cache, <u>portion-by-portion</u>, of <u>data</u> in flash memory, each portion persisting in RAM cache until the currently executing instruction at the microprocessor requires <u>data</u> not in RAM

cache but in the flash memory.

Although Harada transfers the camera control program from the accessory 104 to the flash memory 3 in the camera 100, the applicant fails to see how the Office Action envisions applying the Irons RAM cache to Harada.

In addition, the Harada transfer happens only on those occasions when, upon attachment of a camera accessory, it is determined that the program can be updated.

According to the above information, it is unclear how Irons would have motivated augmentation of Harada with an Irons RAM cache.

Moreover, it is unclear how Irons portion-by-portion cache updating of data would have suggested modification of Harada into an embodiment wherein ". . . the upgraded production-processing program in the DRAM is transferred back to the flash memory."

For at least the above reasons, the Harada/Irons combination proposed by the Office Action fails to render obvious the present invention as recited in claim 7.

Claim 14 recites, "the production file includes a header portion containing a storage address of the flash memory, a compression state, and a booting state for the production file."

With regard to the "storage address of the flash memory," the Office Action cites lines 49-51 of column 7 in Harada, and suggests that the "storage address" is carried in the rewrite instruction. This suggestion by the Office Action has been traversed in the discussion above with respect to claim 13.

As to the "compression state," the Office Action cites to lines 32-45 of

column 8 in Harada. This passage discloses that a plurality of camera control program versions may be stored in the camera accessory 102 for transfer to respective camera models. This passage fails to disclose or suggest "the production file includes a header portion containing . . . a compression state."

With regard to the "booting state," the Office Action cites to lines 32-38 of column 6 in Harada, to suggest that the "booting state" of claim 14 corresponds to the on/off states of the Harada rewrite instruction.

However, the Harada rewrite instruction is not in a header of the camera alteration program (col. 6, lines 56-59; col. 7, lines 8-12).

Secondly, the Harada rewrite instruction does not indicate a boot state.

Instead, examination of the incoming rewrite instruction (step S103) merely precedes camera initialization (col. 8, lines 6-11).

Irons cannot compensate for the shortcomings of Harada.

For at least these reasons, Harada/Irons fails to disclose, suggest or feature an embodiment in which "the production file includes a header portion containing a storage address of the flash memory, a compression state, and a booting state for the production file." Harada/Irons accordingly fails to render obvious the present invention as recited in claim 14.

Claim 26 recites, ". . . wherein the host computer, prior to creation of the file for production, attaches a storage address of the flash memory, a compression state, and a booting state for the production file."

The rejection of claim 26 fails for reasons set forth above with regard to

claims 13 and 14.

Claims 11 and 12 stand rejected under 35 U.S.C. 103(a) as unpatentable over Harada.

Claims 11 and 12 depend from claim 8, and, as discussed above, distinguish patentably over Harada for at least the same reasons set forth above with regard to claim 8.

For the remaining rejected claims, each depends from a base claim and is deemed to be patentable for at least the same reason(s). In addition, however, each dependent claim warrants further consideration based upon its individual merits.

Reconsideration and withdrawal of all claim rejections are respectfully requested.
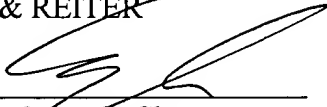
In view of the foregoing amendments and remarks, it is believed that this application is now in condition for allowance. The Examiner is invited to contact the undersigned in the event of any perceived outstanding issues so that passage of the case to issue can be effected without the need for a further Office Action.

A check is enclosed for $200.00 in payment of the fee for adding one, additional independent claim in excess of three.

In the event that any additional fee is required to continue the prosecution of this Application as requested, please charge such fee to Deposit Account No. 502-470.

Respectfully submitted,

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